



# CHAPTER ONE

## Goals and Objectives

### 1.1 Introduction and Project Overview

A Master Plan provides an effective written and graphic representation of the ultimate development of an airport and associated land uses adjacent to an airport, while establishing a schedule of priorities and phasing for the various proposed improvements. This planning document presents a twenty-plus year conceptual development plan for St. Lucie County International Airport (three letter identifier: FPR). Realistic master planning is an evolutionary process due to the justification and funding required during the implementation process. Adjustments to existing and recommended facilities are likely to accommodate changing industry requirements.

FPR is a public airport located three miles northwest of the Ft. Pierce Central Business District within St. Lucie County. At the time of this writing, FPR is currently served by two active runways, Runway 9/27 (future 10R/28L) and Runway 14/32. However, a third runway, 10L/28R, is currently under construction and will be used primarily for training. Runway 10R/28L is designated as the primary runway, and is 6,492 feet long and 150 feet wide. Runway 14/32 is 4,756 by 100 feet, and Runway 10L/28R will be 4,050 by 75 feet. The airport has several published approaches including: an instrument landing system (ILS), global positioning system (GPS), VHF omnidirectional range with distance measuring equipment (VOR/DME), VHF omnidirectional range (VOR) and non-directional beacon (NDB) approaches<sup>1</sup>, and is, at the time of this writing, home to three flight schools. As a result, more than 50 percent of the airport's current operations are associated with flight training activity. In addition, the airport is a base for the United States Customs and Border Patrol (US Customs), which makes it a frequent stop for aircraft and boats in and out of the Bahamas Islands.

The St. Lucie County Airport Master Plan Update was designed to provide the St. Lucie Board of County Commissioners (BOCC), the airport sponsor, with long-term guidance relating to on-going development needs, project phasing, financial requirements, as well as identify the

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<sup>1</sup>A more detailed explanation and list of acronyms is provided in Appendix A of this report.



viability and sustainability of airport operations over the twenty-year planning period. This update entailed a comprehensive analysis of current airport facilities, determination of trends and activities affecting the airport, including NextGen Technology and sustainable ('green') development, and the identification and analysis of potential sectors of the aviation industry having the likelihood of continued operational activity at the airport or new opportunities for expanded aviation activity at FPR. The Master Plan Update also included a comprehensive analysis of airside and landside development alternatives, the preparation of a financial plan, and the development of an Airport Layout Plan set, including comprehensive property map, to guide future development on the airport.

Government assistance related to proposed development is provided in the form of financial grants to the airport sponsor. The grants are provided by the Federal Aviation Administration (FAA) and by the Florida Department of Transportation (FDOT) via Joint Participation Agreements (JPA). As such, the master plan update provides management both a physical and financial plan to guide local decisions relating to airport facilities and their potential improvement.

## **1.2 General Guidelines**

The goal of the master plan update is to define current and future aviation demand at FPR, the means and alternatives for addressing this demand, the role of the airport in the local, regional and national aviation system, and the need for and financial feasibility of new infrastructure and airport facilities. The project was funded through a combination of FDOT grants (80%) and local funds (20%). The project officially began in late 2008, and was scheduled to be completed by early 2010.

The airport's master plan serves a variety of functions including: projecting future aviation activity and development, providing airport management with a financial planning tool, and identifying and guiding on-airport and contiguous land use. The primary objective of the master plan update is to create a 20-year development program that will maintain a safe, efficient, economical, and financially and environmentally sustainable airport facility that will support the needs of its existing and future users as well as the residents of St. Lucie County.

## **1.3 Prior Planning Documentation**

A major goal in the master planning process is the need to update information and plans at strategic intervals, typically every five years, to allow the BOCC to take advantage of new technology, opportunities, and evolving political, social and economic conditions or policies that could impact services and facility requirements at the airport. This may include



demands for scheduled, expanded general aviation (GA) and other aviation services which may fluidly adjust in response to changes in the environment and/or role of the airport.

Several planning and development reports were reviewed in an effort to validate, if still viable, previous recommendations as well as incorporate the recommendations of the master plan into the long-term comprehensive county development. Key local reports reviewed included:

- The 2002-2020 St. Lucie County International Airport Master Plan Update
- The 2005 FAR Part 150 Noise Study
- The 2008 St. Lucie County Evaluation and Appraisal Report, and
- The St. Lucie County Comprehensive Plan, including Future Land Use

## 1.4 Key Issues

The previous master plan, completed in 2002, and FAR Part 150 Study, 2005, identified a number of issues and opportunities, which were evaluated as part of this master plan process. In addition, several other key issues, with input from airport management, tenants, FAA, and FDOT, were identified that might impact both FPR and the surrounding community.

Key issues addressed in the Master Plan Update included, but were not limited to, the following:

- ➔ Existing issues including pavement rehabilitation, strengthening and other short-term requirements;
- ➔ Long-term development options for general aviation, including maximizing airside access;
- ➔ Long-term potential for regularly scheduled air service and associated facility requirements;
- ➔ Existing and long-term US Custom's requirements and associated facilities;
- ➔ Impacts of new trends and issues including NextGen technology, very light jets, aircraft sport license, sustainable development, fuel prices and demand, terrorism, etc;
- ➔ Comprehensive on-airport land use planning including portions of property on, and contiguous to the airport within the existing and future flight paths;
- ➔ Noise mitigation options to limit potential aviation impacts on the surrounding communities;
- ➔ Ground access to existing and future airport development areas;
- ➔ Future aviation development areas within the current boundaries of the airport;
- ➔ Potential on-airport commercial/industrial development opportunities;
- ➔ Balance aviation and non-aviation development;
- ➔ Environmental factors that may act to limit or guide the development of airport property;
- ➔ Airport and airfield security; and
- ➔ Financial sustainability and plans for revenue enhancement.



By addressing these and other issues, this Master Plan developed an action plan to address current and future aviation demand at FPR and to improve the quality of life in the surrounding community.

## 1.5 Goals and Objectives

The goal of the Master Plan Update is to provide alternative options for airport development that address current and future demand, identify the role of the airport in the local, regional and national aviation system, and provide potential utilization or re-use options for existing infrastructure and airport facilities. The master planning activities will provide a five-year capital improvement program for future development of the airport, as well as an overview of land use compatibility issues within the airport environs.

In support of these goals, the following objectives were identified and considered as part of this master plan update:

- ➔ Airside, landside, and airspace improvements, and recommend options that optimize the economic benefits of the airport to the community.
- ➔ Enhance the safety, ease of use, and operational capacity of the airport's landside and airside facilities.
- ➔ Identify short-term improvements and optimize short-term funding opportunities.
- ➔ Establish an implementation schedule for short, intermediate, and long-term improvements, and ensure that they are financially feasible.
- ➔ Ensure that short-term actions and recommendations are consistent with, and do not preclude long-range planning options.
- ➔ Incorporate the interests of and work closely with the public and governmental entities during the planning process.
- ➔ Remain sensitive to the overall environmental characteristics and issues in areas surrounding the airport.
- ➔ Coordinate with other related planning studies developed by the airport, government bodies, or community groups.

As such, the Master Plan Update provides the St. Lucie Board of County Commissioners with a comprehensive overview of the airport's needs over the next twenty years, including issues relating to the timing and costs of proposed development based upon appropriate activity triggers.



## 1.6 Regulatory Guidelines

The Master Plan Update study was conducted in accordance with **FAA Advisory Circulars 150/5070-6B, *Airport Master Plans*, AC 150/5325-4B, *Runway Length Analysis*, and AC 150/5300-13, *Change 14, Airport Design***, as well as **FDOT Guidebook for Airport Master Planning, FDOT Procedural Guidance 725-040-100-e, *Airport Master Plans*, and FDOT Procedural Guidance 725-040-040-h, *Aviation Program Management***. Furthermore, current guidance will be incorporated from the FAA Airports District Office (Orlando), FDOT Aviation Office, and other local government agencies. Planning efforts of the city, county, region, state, and nation have been coordinated into the Master Plan to provide a cohesive plan for the benefit of FPR and all of the participating organizations.

In an effort to evaluate potential environmental factors which would impact future on-airport development, national, state and local regulatory guidelines were considered. These guidelines were used to assist the sponsor and the planning consultant in the development of airfield and landside alternatives which were tailored to the airport's size, unique setting and activity while also considering the airport's environmental setting, the identification of environmentally related permits and the potential impacts of recommended development projects. An in-depth analysis of existing environmental conditions at FPR is provided in **Chapter Two, *Inventory of Existing Conditions***, and **Appendix C, *Natural Features Inventory***.

### 1.6.1 Water Quality

#### Legislation

The Federal Water Pollution Control Act, as amended by the Clean Water Act provides the authority to establish water control standards, control discharges into surface and subsurface waters, develop waste treatment management plans and practices, and issue permits for discharges and for dredged and filled materials into surface waters. The Fish and Wildlife Coordination Act requires consultation with the United States Fish and Wildlife Service (USFWS) and the Florida Fish and Wildlife Conservation Commission (FFWCC) when any alteration and/or impounding of water resources is expected. The Federal National Pollution Discharge Elimination System (NPDES) permit program provides regulations that govern the quality of storm water discharges into water resources of the United States.

#### Regulatory Agencies

The United States Army Corps of Engineers (COE), the Florida Department of Environmental Protection (FDEP), and the South Florida Water Management District (SFWMD) have jurisdiction over and regulate activities that alter the landscape and disrupt water flow to wetland areas and surface waters through the Environmental Resource Permitting (ERP) Program in Florida. The program forwards permit applications to other state and federal



agencies including the FFWCC and the USFWS. Permitting requirements for construction that results in a disturbance exceeding five acres are specified by NPDES regulations and administered by the FDEP.

### **1.6.2 Historical, Architectural, Archaeological, and Cultural Resources**

#### Legislation

The National Historic Preservation Act of 1966 and the Archaeological and Historic Preservation Act of 1974 provide protection against development impacts that would cause change in historical, architectural, archaeological, or cultural resources.

#### Regulatory Agencies

The Department of State, Division of Historical Resources is responsible for promoting historical, archaeological, museum, and folk culture resources in Florida.

### **1.6.3 Biotic Communities**

#### Legislation

The Fish and Wildlife Coordination Act (48 Statute 401 as amended; 16USC et. Seq.) considers impacts to habitat and wildlife. Section 2 of this act requires consultation with USFWS, the United States Department of the Interior (USDI), and state agencies that regulate wildlife whenever water resources are modified by a federal, public, or private agency under federal permit of license.

#### Regulatory Agencies

The USFWS and FFWCC have authority under the act to provide comments and recommendations concerning vegetation and wildlife resources.

### **1.6.4 Endangered and Threatened Species**

#### Legislation

The Endangered Species Act of 1973 (ESA), as amended, requires federal agencies, in consultation with, and assisted by the USFWS, to ensure that their actions are not likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat of such species. Section 7 of the Act states that federal agencies must review their actions: If those actions will affect a listed species or its habitat, they must consult with the United States Fish and Wildlife Service.

#### Regulatory Agency

The USFWS, the Florida Department of Agriculture and Consumer Services (FDACS), and the FFWCC have jurisdiction over and administer native endangered and threatened species





permits for Florida. During the consultation process, the USFWS will determine the significance of potential impacts to federally protected species and will recommend methods to avoid or mitigate for impacts that may occur as a result of the proposed projects.

The FFWCC Threatened and Endangered Species Section reviews and issues permits that involve Florida's protected terrestrial animal species. The FFWCC Bureau of Protected Species Management reviews and issues permits that involve Florida's protected aquatic wildlife species. The FDACS Division of Plant Industry is responsible for providing protection to Florida's protected native plant species that are classified as endangered, threatened, or commercially exploited.

### **1.6.5 Wetlands**

#### Legislation

Executive Order 11990, Protection of Wetlands, mandates that each federal agency take action to minimize the destruction, loss, or degradation of wetlands, and preserve and enhance their natural values. On the federal level, wetlands are regulated according to Section 404 of the Clean Water Act, which requires a permit for dredging and filling activities that take place in Waters of the United States, including wetlands.

The legal framework for the regulation of activities in wetlands by the State of Florida and by the state's Water Management Districts is provided, in part, by Chapter 373 of the Florida Statutes, *the Florida Water Resources Act of 1972*, specifically 373.414 which states that an activity regulated under this part will not be harmful to water resources; water quality standards will not be violated; and such activity in, on, or over surface waters or wetlands, is not contrary to the public interest. If such an activity significantly degrades or is within an Outstanding Florida Water, the applicant must provide reasonable assurance that the proposed activity will be clearly in the public interest. Specifics concerning permit requirements are codified in Chapter 40, parts A through E, of the Florida Administrative Code.

#### Regulatory Agencies

In Southeast Florida, the COE, the FDEP, and the SFWMD have jurisdiction over and regulate activities that alter the landscape and disrupt water flow to wetland areas and surface waters through the State ERP Program.



### **1.6.6 Floodplains**

#### Legislation

Executive Order 11988, “Floodplain Management” defines floodplains as lowland areas adjoining inland and coastal waters, especially those areas subject to one percent or greater chance of flooding in any given year.

#### Regulatory Agencies

The Federal Emergency Management Agency (FEMA) has produced Flood Insurance Rate Maps (FIRMs) for communities participating in the National Flood Insurance Program. The maps detail the 100-year and 500-year base flood elevations. The State of Florida administers and requires compensation for floodplain impacts through the ERP program. SFWMD has jurisdiction over Southeast Florida.

### **1.6.7 Coastal Zone Management Program**

#### Legislation

The Coastal Zone Management Act (CZMA) aims to preserve, protect, develop, and where possible, restore and enhance the resources of the nation’s coastal zone. The Florida Coastal Management Act of 1978 (Chapter 380, Part II, Florida Statutes) authorized the FDEP to develop a comprehensive state coastal management program based upon existing Florida Statutes and Rules.

#### Regulatory Agency

The FDEP is responsible for directing the implementation of the Florida Coastal Management Program (FCMP). The program is based on a cooperative network of nine agencies including the FDEP, the Florida Department of Community Affairs (DCA), FFWCC, Department of State (DOS), Governor’s Office of Planning and Budgeting (OPB), Department of Transportation (DOT), Department of Health (DOH), and the Division of Forestry within the DACS. SFWMD is also a cooperating member in the consistency review process for Southeast Florida.

### **1.6.8 Farmland**

#### Legislation

The Farmland Protection Policy Act of 1981 (FPPA) requires the evaluation of farmland conversion to non-agricultural areas. Prime farmland is land best suited for producing food, feed, forage, fiber, and oilseed crops. This land has the quality, duration of growing season, and moisture supply necessary to produce sustained crop yields with minimal energy and economic input.





### Regulatory Agencies

The National Resources Conservation Service (NRCS) has jurisdiction and should be consulted if farmland is to be converted to non-agricultural use by a federally funded project. The consultation determines whether the farmland is classified as “prime” or “unique.” If it is, the Farmland Protection Act requires rating the farmland conversion impacts based upon the length of time farmed, amount of farmland remaining in the area, level of local farm support services, and the level of urban land in the area.

## **1.7 Master Plan Process**

This Airport Master Plan provides a step-by-step outline of the development actions required to maintain the airfield facilities. This process is defined by the FAA but allows the planning process to be responsive to airport and community specific needs and issues. To accomplish the objectives previously identified, the study team completed the following tasks:

- ➔ Conducted an inventory of the existing documents related to FPR, the physical facilities, the demographics of the airport service area, and the airport environment.
- ➔ Collected historical operational data, conducted tenant interviews, and forecasted aviation activity through the year 2029.
- ➔ Evaluated and compared the airfield, landside and terminal capacity based upon expected aviation activity.
- ➔ Determined the airfield, landside and terminal facilities, including commercial facilities, required to meet the forecast demand.
- ➔ Developed and evaluated alternative methods to meet the facility requirements of the airfield, landside and terminal.
- ➔ Created a concise Airport Layout Plan (ALP) drawing set including property map reflecting the proposed improvements through the year 2029.
- ➔ Compiled a schedule of the proposed improvements including cost estimates and phasing.

The Master Plan is a written articulation and graphical representation of the ultimate conceptual development of the Airport over the course of the planning period. The Master Plan provides the sponsor with a comprehensive overview of the airport’s needs over the next twenty years, including issues related to the timing of proposed development, costs for this development, methods of financing, management options, and a clear plan of action. The product of this process includes a Capital Improvement Program for future development of FPR. Also, a financial analysis leading to the development of a Financial Plan was conducted by LPA with St. Lucie County staff coordination.



Though many changes are likely to take place before facilities are designed, approved, and constructed, an approved Airport Layout Plan is essential for an airport to qualify for, and receive federal and/or state assistance, and will prove as an invaluable guide for management decisions. The steps that will be followed during the development of the Airport Master Plan are illustrated in **Figure 1-1, *Steps in the Master Planning Process***.

Overall, Implementation of the study recommendations will begin following FAA and FDOT review and approval of both the master plan report and airport layout plan.

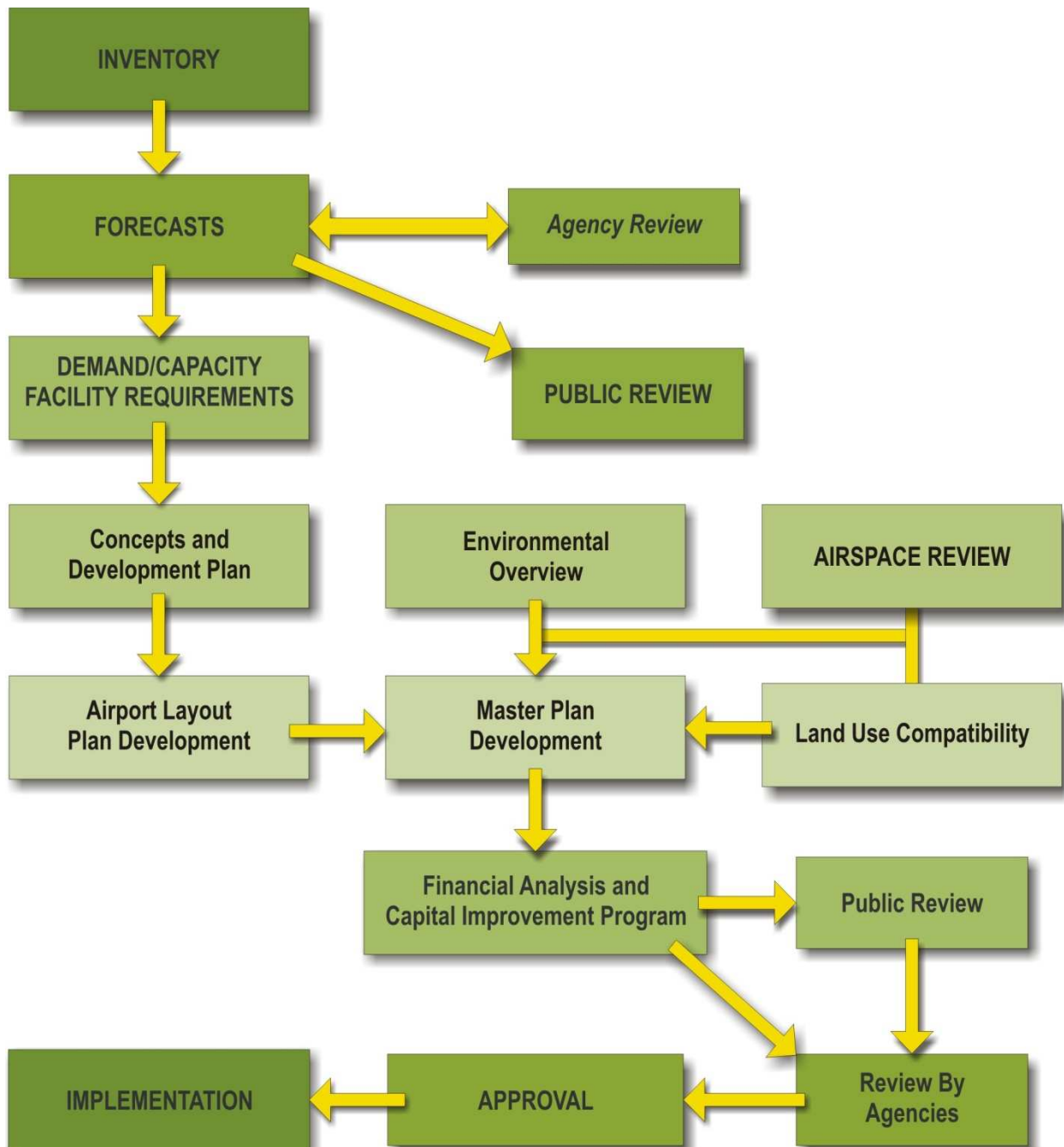
## **1.8 Key Participants and Public Involvement**

As part of the master plan process, participation by a variety of individuals and organizations is invaluable to providing a comprehensive and realistic long-term airport development plan. In an effort to include all interested parties, a website was developed, which allowed for public input, in conjunction with tenant and public input at various meetings and workshops conducted throughout the planning process. Input from these meetings was incorporated into the Master Plan, and recommendations were provided to the St. Lucie County Board of County Commissioners for final approval.

### **1.8.1 Technical Advisory Committee**

The formation of the Technical Advisory Committee (TAC) was critical in the development of a master plan. The St. Lucie County International Airport Master Plan project included technical representatives from FAA and FDOT, appointed BOCC Representatives, Airport Fixed Based Operators, Zoning and Planning Representatives from the Cities of Port St. Lucie and Ft. Pierce, as well as St. Lucie Chamber of Commerce, environmental and local City representatives. The TAC represented a cross-section of individuals, who provided unique insights into the master plan process. During the course of the planning project, the TAC met four times at key sections of the report to provide direction, insight and input into short and long-term development of FPR. Their comments as well as those provided from the airport tenants and general public are included in **Appendix B, *Key Participants and Public Involvement***, of this report.

**Figure 1-1**  
**Steps in the Master Plan Process**



*Sources: FAA Advisory Circular 150/5060-6B, Airport Master Plans, and The LPA Group Incorporated, 2009*



### **1.8.2 St. Lucie County Staff**

Key members of St. Lucie County staff, including airport, planning, zoning, legal, and finance, were contacted to obtain input and data related to existing and proposed development including the airport's long-term role within the community. Furthermore, assistance from St. Lucie County staff members was critical for providing operating and financial data necessary to complete a plausible twenty-year, airport development plan.

### **1.8.3 St. Lucie County Planning and Zoning Department**

Planning efforts and previous studies, including the 2008 St. Lucie County Evaluation and Appraisal Report, The St. Lucie County Comprehensive Plan, including Transportation and Zoning requirements, were considered in the long-term development of the airport. The recommendations of the approved master plan update are to be included in the St. Lucie County Comprehensive Plan and associated zoning requirements. Coordination with the St. Lucie planning was conducted throughout the master plan process.

### **1.8.4 Public Involvement Process**

Throughout this planning process interested participants were given several opportunities to provide input. Groups included airport tenants, users, local government officials, community leaders, and the general public. At the beginning of this study, a website was developed by St. Lucie County to provide interested parties the opportunity to provide input on the master plan process. Furthermore, the airport tenant meetings and Technical Advisory Committee meetings were advertised on the County's website, and a County Commission Workshop was provided to allow another venue for public participation. Information and comments provided throughout this study are included in **Appendix B, Key Participants and Public Involvement**, of this report.

## **1.9 Summary**

While the outlook for aviation over the next twenty years and what impact it will have on St. Lucie County International Airport, remains to be seen. Based upon population and business growth within the State as well as the continued demand for aviation services by both business groups and the general public, demand for services at FPR will continue to grow. A key factor in FPR's future success depends upon determining the viability of the present airfield, airside and landside facilities to accommodate demand well into the future. This process also provides a forum for discussion and establishment of links between community and airport goals. Thus, this Airport Master Plan should serve as a guide to decision makers, users, and the general public relative to realistic and achievable development that is in line with both airport and community objectives.